



CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE

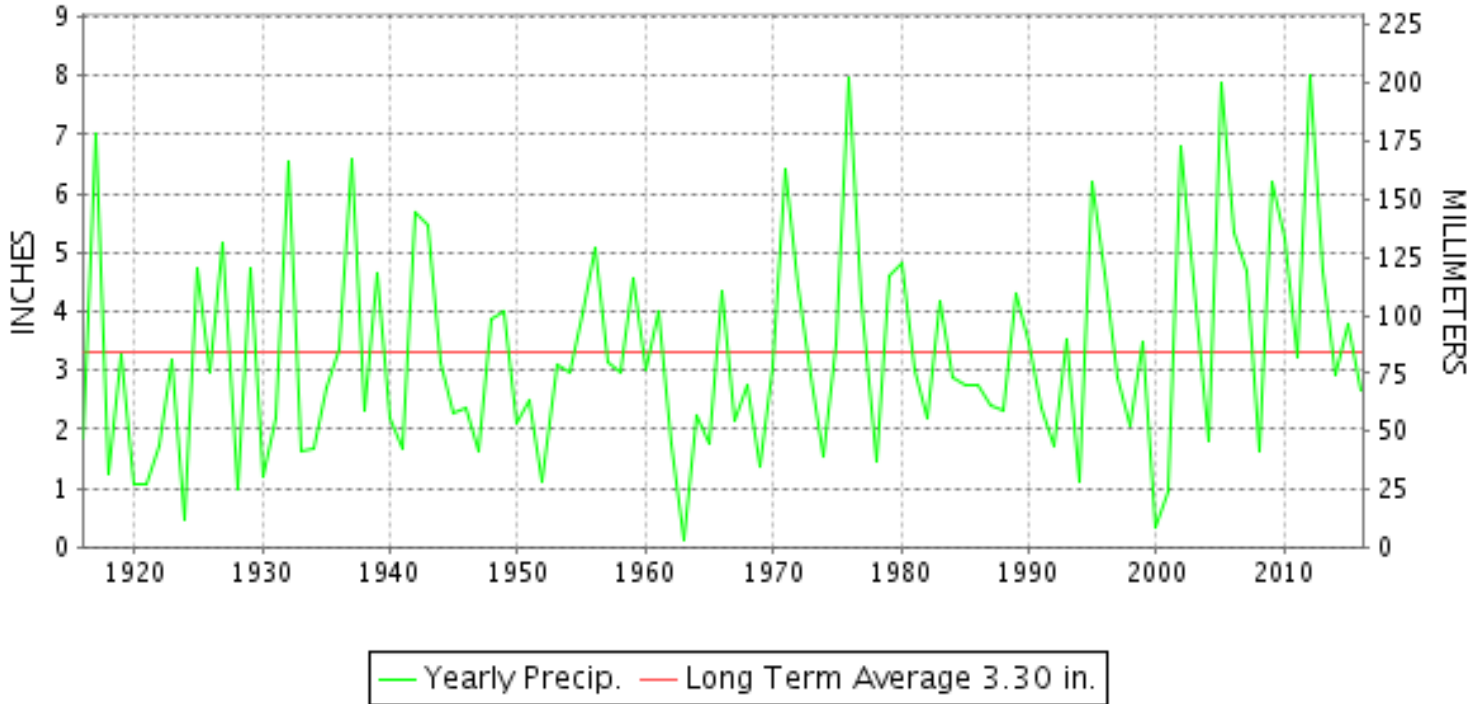
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OCTOBER PRECIPITATION BY YEAR



TEMPERATURE AND PRECIPITATION EXTREMES

MARYLAND

HIGHEST TEMPERATURE	88	OCTOBER 19+	2 STATIONS
LOWEST TEMPERATURE	26	OCTOBER 26	OAKLAND 1 SE
GREATEST TOTAL PRECIPITATION	6.46		OAKLAND 1 SE
LEAST TOTAL PRECIPITATION	0.58		DAMASCUS 3 SSW
GREATEST 1 DAY PRECIPITATION	3.97	OCTOBER 08	PRINCESS ANNE

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DELAWARE

HIGHEST TEMPERATURE	87	OCTOBER 19+	2 STATIONS
LOWEST TEMPERATURE	30	OCTOBER 26	WILMINGTON NEW CASTLE CO AP
GREATEST TOTAL PRECIPITATION	2.43		DOVER
LEAST TOTAL PRECIPITATION	2.11		WILMINGTON PORTER RSCH
GREATEST 1 DAY PRECIPITATION	1.01	OCTOBER 09	WILMINGTON NEW CASTLE CO AP

MONTHLY STATION AND DIVISION SUMMARY

STATION	TEMPERATURE (°F)											PRECIPITATION (IN)												
	AVERAGE MAXIMUM	AVERAGE MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	HEATING DEG. DAYS	COOLING DEG. DAYS	NO. OF DAYS				TOTAL	DEPARTURE FROM NORMAL	GREATEST 24 HOURS	DATE	ICE PELLETS, SNOW			NO. OF DAYS		
											MAX		MIN						TOTAL	MAX DEPTH ON GROUND	DATE	.10 OR MORE	.50 OR MORE	1.00 OR MORE
											>=90	<=32	<=32	<=0										
MILLERS 4 NE	68.0	47.7	57.9	3.7	84	19	29	26	239	26	0	0	1	0	1.56	-2.19	0.47	01	0.0	0		5	0	0
SMITHSBURG 2NW	67.5	44.2	55.8	2.1	82	20+	27	27	299	22	0	0	2	0	0.88	-2.36	0.27	09	0.0	0		5	0	0
--DIVISIONAL DATA-----> APPALACHIAN MOUNTAIN 07			57.7	2.4B										0.97	-2.54B									
CUMBERLAND 2	69.6	45.9	57.7	1.7	86	19	33	27+	241	26	0	0	0	0	2.16	-0.41	0.80	08	0.0	0		4	2	0
FROSTBURG 2	62.9	43.1	53.0	3.0	79	21	29	27	370	7	0	0	4	0	3.19	0.15	1.05	01	0.0	0		5	3	1
SHARPSBURG 5 S	71.4	44.2	57.8	3.2	88	20	28	27	245	30	0	0	4	0	0.88	-2.53	0.24	09	0.0	0		4	0	0
WILLIAMSPORT														M					0.0	0				
--DIVISIONAL DATA-----> ALLEGHENY PLATEAU 08			56.2	3.5B										2.08	-1.00B									
OAKLAND 1 SE	66.4	42.1	54.3	4.9	83	21	26	26	332	8	0	0	2	0	6.46	3.31	2.40	28	0.0	0		9	3	2
SAVAGE RIVER DAM	63.5	43.8	53.7	2.9	78	21	30	27	350	4	0	0	2	0	2.52	-0.14	0.78	08	0.0	0		7	2	0
SINES DEEP CREEK	M	M	M		71	31+	28	27	430E	0	0	0	7	0	A 4.34		1.05	21	M	0		4	2	1
--DIVISIONAL DATA-----> DELAWARE NORTHERN 01			54.0	4.8B										4.44	1.41B									
WILMINGTON NEW CASTLE CO AP	69.4	48.5	59.0	2.8	87	19	30	26	212	33	0	0	1	0	2.22	-1.20	1.01	09	0.0	0		4	2	1
WILMINGTON PORTER RSCH	65.8	48.5	57.1	1.3	81	19	34	28+	252	17	0	0	0	0	2.11	-1.70	0.88	09	M	0		5	1	0
--DIVISIONAL DATA-----> SOUTHERN 02			58.1	2.3B										2.17	-1.19B									
DOVER	71.2	51.7	61.5	2.8	87	19	33	26	159	58	0	0	0	0	A 2.43	-0.99	0.19	22	M			1	0	0
--DIVISIONAL DATA----->			61.5	4.2B										2.43	-0.95B									

MARYLAND AND DELAWARE
201610

DAILY PRECIPITATION (INCHES)

STATION	TOTAL	DAY OF MONTH																																
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MARYLAND																																		
SOUTHERN																																		
EASTERN SHORE 01																																		
ASSATEAGUE	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PRINCESS ANNE	M 4.57	0.15	-						3.97	-																								
SALISBURY 2N	4.18	0.11	0.01	0.17	0.01	0.01			0.15	3.34												0.22										0.45		
SALISBURY FAA AP	4.04	0.19	0.10		T	T			1.12	2.22												0.18	0.10									0.13		
SNOW HILL 4 N	0.97	0.36	T	T	T		T	T	0.20		T				T								0.20				0.05					0.16		
CENTRAL																																		
EASTERN SHORE 02																																		
ROYAL OAK 2 SSW	3.31	0.04		0.11					0.66	1.60	0.47		T									0.15	0.10								0.17		0.01	
LOWER SOUTHERN 03																																		
MECHANICSVILLE 5 NE	3.75	0.39	0.38							2.58	T												0.21	T								0.19		
SOLOMONS	MA 4.01	*	0.84 _a	*	T _a	T			*	2.87 _a		-	-	-				-	T	T	*	*	0.14 _a	T	T			*	*	*	0.15 _a	0.01		
UPPER SOUTHERN 04																																		
BALTIMORE-WASHINGTON INTL AP	0.78	0.40	0.01				T	T	0.18	0.01												0.11	T									0.07		T
BALTIMORE WASHINGTON INTL CLIM	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BELTSVILLE	0.73	0.03	0.21							0.21													0.19									0.06		0.03
DALECARLIA RSVR	M 0.77	0.14	0.11				-			0.20									0.02				0.22								0.06		0.02	
MARYLAND SCI CTR	0.63	0.39							0.08													0.13									0.03			
NATL ARBORETUM DC	0.93	0.06	0.09			T				0.37													0.32								0.06		0.03	
OXON HILL	1.53	0.10	0.29							0.69	0.01											T	0.31	T							0.12		0.01	
NORTHERN																																		
EASTERN SHORE 05																																		
STEVENSVILLE 2SW	2.32	0.04	0.17	0.01						1.75	0.15												0.02								0.17		0.01	
SUDLERSVILLE 1S	3.06								0.80	1.65												T	0.40							0.21		T		
NORTHERN CENTRAL 06																																		
ABERDEEN PHILLIPS FLD	A 1.00	*	*	0.11 _a			T		0.19	0.24													0.03								0.35		0.08	
BRIGHTON DAM	0.70	0.20	0.10	0.10						0.05													0.20										0.05	
CONOWINGO DAM	0.97		0.08	0.20						0.08													0.05								0.35		0.21	
CYLBURN	1.25	0.08	0.62							0.07													0.31								0.17		T	
DAMASCUS 3 SSW	0.58	0.35	T						0.05													0.11	T							0.03	0.02	0.02		
EMMITSBURG 2 SE	0.80	0.38	0.15	0.01		T			0.05	0.05													T		T				0.01	0.13			0.02	
MILLERS 4 NE	1.56	0.47	0.05	0.18			T			0.02			0.05									0.12								0.29	0.09	0.27	0.02	
SMITHSBURG 2NW	0.88	0.10	0.20							0.27													0.10								0.01	0.20		
APPALACHIAN																																		
MOUNTAIN 07																																		
CUMBERLAND 2	2.16	0.39	0.05						0.80	0.67					0.02								0.11								0.08		0.04	
FROSTBURG 2	3.19	1.05	0.08						0.97	0.55					0.03								0.15	0.05	0.05					0.14	0.01	0.09		
SHARPSBURG 5 S	0.88	0.19	0.16						0.04	0.24					T							0.01	0.06	0.05						0.08		0.12		
WILLIAMSPORT	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
ALLEGHENY PLATEAU 08																																		

DAILY PRECIPITATION (INCHES)

STATION	TOTAL	DAY OF MONTH																														
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
OAKLAND 1 SE	6.46	0.25		0.05	0.01				1.45	0.43			0.01		0.27			0.02				0.50	0.45	0.20	0.02					2.40		0.40
SAVAGE RIVER DAM	2.52	0.36						0.78	0.61					0.08								0.15	0.24						0.16		0.14	
SINES DEEP CREEK	A 4.34	*	*	0.17 _a				*	*	*	1.75 _a			0.25	*	*	0.05 _a				1.05	0.50	*	0.10 _a				0.12	*	*	0.35 _a	
DELAWARE																																
NORTHERN 01																																
WILMINGTON NEW CASTLE CO AP	2.22	0.04	0.01	0.01				0.25	1.01				T									0.04	0.06		T			0.63		0.17		
WILMINGTON PORTER RSCH	2.11	0.04	0.03					0.17	0.88													0.04	0.15					0.46		0.34		
SOUTHERN 02																																
DOVER	A 2.43	0.05	0.01	0.07				*	1.97 _a														0.19				0.06	0.05			0.03	

DAILY TEMPERATURES (°F)

STATION	OB. TIME	MAX/MIN	DAY OF MONTH																															AVERAGE
			01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BRIGHTON DAM	08	MAX	62	62	70	73	71	68	66	69	66	65	62	63	66	69	63	66	72	80	83	83	80	76	76	66	68	60	55	59	59	71	81	68.7
		MIN	60	59	59	51	53	49	56	55	55	45	37	39	43	48	44	40	50	53	57	61	65	51	42	47	37	31	33	32	35	37	47	47.5
CONOWINGO DAM	07	MAX	63	62	68	72	68	68	73	73	67	65	62	63	63	66	61	63	68	76	76	80	77	76	56	65	64	56	52	58	55	65	76	66.4
		MIN	56	59	60	54	56	51	53	53	58	51	41	40	42	48	43	41	45	54	58	58	61	54	43	42	40	33	33	43	34	35	48	48.0
CYLBURN	08	MAX	68	72	78	79	72	67	68	70	66	63	60	62	65	67	61	63	72	80	82	84	81	80	58	66	66	58	55	59	57	72	82	68.8
		MIN	63	67	70	59	56	52	52	56	54	46	40	41	43	43	42	42	49	57	62	64	64	53	45	49	44	33	35	48	38	40	46	50.1
DAMASCUS 3 SSW	22	MAX	61	68	71	69	66	64	70	64	63	60	63	65	66	60	61	72	79	82	83	79	74	55	65	65	57	54	58	57	72	80	61	66.6
		MIN	58	59	56	52	51	50	54	60	52	43	38	44	49	39	41	50	55	58	62	63	55	46	45	50	37	34	44	41	39	58	40	49.1
EMMITSBURG 2 SE	07	MAX	60	61	72	72	71	68	70	77	65	65	62	65	68	69	61	68	73	80	83	86	82	72	58	68	66	59	55	55	58	73	83	68.5
		MIN	55	57	56	51	50	47	48	52	52	43	33	34	38	38	35	35	45	51	55	64	64	51	46	46	40	27	27	45	34	35	48	45.2
MILLERS 4 NE	18	MAX	60	70	72	72	69	71	75	69	64	61	64	66	67	63	65	72	80	82	84	79	76	58	66	64	57	54	56	57	74	80	61	68.0
		MIN	55	58	56	53	50	45	50	58	50	43	35	40	46	39	36	45	56	56	60	61	58	48	43	49	37	29	41	44	35	59	44	47.7
SMITHSBURG 2NW	08	MAX	58	62	72	71	72	68	71	75	63	63	62	65	68	66	63	67	75	80	82	82	80	70	54	67	63	55	53	54	56	75	79	67.5
		MIN	54	55	54	47	48	45	45	55	51	38	33	33	40	34	34	41	48	55	55	64	63	48	33	47	37	28	27	45	34	36	44	44.2
APPALACHIAN MOUNTAIN 07																																		
CUMBERLAND 2	07	MAX	60	65	77	75	75	66	72	70	66	63	68	64	72	63	62	71	83	85	86	85	83	66	55	69	66	59	54	55	60	81	82	69.6
		MIN	58	58	55	49	50	49	49	56	49	42	37	37	41	38	37	37	49	53	53	60	60	46	46	46	41	33	33	46	38	38	38	45.9
FROSTBURG 2	07	MAX	53	58	69	67	68	59	66	61	61	56	59	62	65	56	58	65	75	76	78	76	79	61	45	60	58	52	51	56	51	73	75	62.9
		MIN	52	53	52	47	48	44	44	55	42	37	36	37	39	32	31	38	49	55	57	56	55	38	38	42	37	30	29	39	38	46	41	43.1
SHARPSBURG 5 S	07	MAX	65	64	77	76	75	72	73	75	66	66	65	68	70	71	65	70	79	84	86	88	84	73	58	70	67	61	59	60	61	80	84	71.4
		MIN	57	58	55	48	50	45	46	54	52	39	32	32	39	36	35	36	47	54	55	59	65	50	37	37	34	30	28	43	35	35	46	44.2
ALLEGHENY PLATEAU 08																																		
OAKLAND 1 SE	07	MAX	58	68	68	69	68	63	68	65	66	61	62	68	72	57	61	74	75	77	78	77	83	62	50	62	64	56	57	65	56	73	75	66.4
		MIN	55	53	53	44	44	39	39	57	42	38	33	33	36	34	34	34	44	50	53	57	57	39	39	50	37	26	27	41	38	38	42	42.1
SAVAGE RIVER DAM	08	MAX	56	62	69	71	67	60	65	66	62	58	62	59	63	58	56	63	73	75	77	77	78	63	47	62	60	53	50	58	53	72	74	63.5
		MIN	54	55	53	48	48	44	44	52	46	44	35	34	38	36	36	37	46	51	51	57	56	43	41	46	38	31	30	42	39	39	45	43.8
SINES DEEP CREEK	07	MAX			66	65	66	61	66			71	60	67	67			69	70	70	71	71	60		58	56	50	50	50					M
		MIN			51	42	41	39	38			32	32	32	32			33	49	43	54	47	39		33	31	29	28	40					M
DELAWARE NORTHERN 01																																		
WILMINGTON NEW CASTLE CO AP	24	MAX	65	71	77	69	71	75	75	67	65	65	67	68	71	66	65	72	81	83	87	79	78	56	67	67	60	55	59	57	67	78	68	69.4
		MIN	59	62	57	54	51	52	51	60	50	44	39	43	48	41	39	44	57	57	63	63	55	48	43	46	36	30	44	38	35	55	41	48.5
WILMINGTON PORTER RSCH	24	MAX	61	65	71	64	66	63	72	72	63	60	61	66	66	60	63	68	78	80	81	77	76	55	61	61	54	49	57	57	64	74	74	65.8
		MIN	55	58	59	56	53	53	53	53	50	44	42	48	50	41	43	46	55	58	61	61	55	46	39	49	39	34	34	34	37	55	43	48.5
SOUTHERN 02																																		
DOVER	16	MAX	66	73	75	73	68	75	74	71	64	63	67	70	72	70	65	74	84	84	87	84	81	77	66	68	65	57	62	61	70	80	60	71.2
		MIN	63	62	60	56	55	59	57	62	52	47	41	46	49	44	42	44	59	62	66	62	62	50	45	48	42	33	44	46	37	60	49	51.7

SNOWFALL AND SNOW ON GROUND (INCHES)

STATION		DAY OF MONTH																																
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MARYLAND SOUTHERN EASTERN SHORE 01 ASSATEAGUE PRINCESS ANNE SALISBURY 2N SALISBURY FAA AP SNOW HILL 4 N	SNOWFALL																																	
	SNOWFALL																																	
	SNOWFALL																																	
	SNOWFALL																																	
	SN ON GND																																	
	SNOWFALL																																	
DELAWARE NORTHERN 01 WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RSCH	SNOWFALL																																	
	SN ON GND																																	
	SNOWFALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SN ON GND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Snowfall: Includes snow and ice. Values for NWS stations (J index note) are Mid-Mid (LST).

Snow on ground: Includes snow, sleet, ice, and hail. Values for NWS stations (J index note) are observed at 12 UTC (GMT).

Water Equivalent: Given for NWS stations (J index note) only, when snow depth is 2 inches or more, and is measured at 18 UTC (GMT)

PAN EVAPORATION AND WIND

STATION		DAY OF MONTH																															TOTAL OR AVERAGE
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MARYLAND UPPER SOUTHERN 04 BELTSVILLE	WIND	77	40	9	27	38	27	22	37	79	106	34	14	17	45	16	18	31	18	26	21	54	118	114	40	57	56	13	52	66	30	58	1360
	EVAP	0.00	0.00	0.07	0.16	0.10	0.10	0.03	0.01	0.10	0.21	0.15	0.09	0.08	0.10	0.10	0.12	0.09	0.11	0.14	0.10	0.12	0.19	0.18	0.12	0.11	0.13	0.08	0.00	0.13	0.08	0.13	3.13
	MAX	66	66	77	80	76	75	70	72	66	68	68	68	72	70	71	73	77	84	84	86	85	79	62	66	65	64	63	58	64	71	77	71.7
	MIN	57	59	61	55	54	54	55	57	63	42	41	42	45	42	44	47	48	54	57	60	62	48	37	37	38	36	36	44	37	44	47	48.5
ALLEGHENY PLATEAU 08 SAVAGE RIVER DAM	WIND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	EVAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	

Evaporation: Is measured in hundreths of inches.

Wind: Is measured in miles.

Max and Min: The maximum and minimum temperatures (Fahrenheit) of the water in the evaporation pan.

STATION INDEX

STATION	INDEX NO.	DIVISION	COUNTY	LATITUDE	LONGITUDE	ELEVATION (IN FEET)	OBSERVATION TIME AND TABLES			
							LOCAL STD TIME			
							TEMP	PRECIP	EVAP	SPECIAL SEE (NOTES)
MARYLAND										
ABERDEEN PHILLIPS FLD	0015	06	HARFORD	39 28	76 10W	57	07	07		CH
ASSATEAGUE	0335	01	WORCESTER	38 4	75 13W	10	VAR	VAR		H
BALTIMORE WASHINGTON INTL CLIM	0467	04	ANNE ARUNDEL	39 11	76 39W	101		24		H
BALTIMORE-WASHINGTON INTL AP R	0465	04	ANNE ARUNDEL	39 10	76 41W	156	24	24		HJ
BELTSVILLE	0700	04	PRINCE GEORGE'S	39 2	76 56W	145	08	08	08	CH
BRIGHTON DAM	1125	06	MONTGOMERY	39 11	77 0W	330	08	08		H
CONOWINGO DAM	2060	06	HARFORD	39 39	76 11W	40	07	07		H
CUMBERLAND 2	2282	07	ALLEGANY	39 39	78 45W	730	07	07		H
CYLBURN	2308	06	BALTIMORE	39 21	76 39W	235	08	08		H
DALECARLIA RSVR	2325	04	DISTRICT OF COLUMBIA	38 56	77 7W	150	08	08		H
DAMASCUS 3 SSW	2336	06	MONTGOMERY	39 16	77 14W	700	22	22		H
EMMITSBURG 2 SE	2906	06	FREDERICK	39 41	77 17W	403	07	07		H
FROSTBURG 2	3415	07	ALLEGANY	39 40	78 56W	2170	07	07		H
MARYLAND SCI CTR R	5718	04	BALTIMORE (CITY)	39 17	76 37W	20	24	24		H
MECHANICSVILLE 5 NE	5865	03	ST. MARY'S	38 28	76 42W	100	07	07		H
MILLERS 4 NE	5934	06	CARROLL	39 43	76 48W	860	18	18		CH
NATL ARBORETUM DC	6350	04	DISTRICT OF COLUMBIA	38 55	76 58W	50	08	08		H
OAKLAND 1 SE	6620	08	GARRETT	39 25	79 24W	2420	07	07		H
OXON HILL	6800	04	PRINCE GEORGE'S	38 47	76 60W	120	07	07		H
PRINCESS ANNE	7330	01	SOMERSET	38 13	75 41W	20	17	17		H
REISTERSTOWN 2 NW	7580	06	BALTIMORE	39 30	76 50W	737	08	08		H
ROYAL OAK 2 SSW	7806	02	TALBOT	38 43	76 11W	10	17	17		H
SALISBURY 2N	8004	01	WICOMICO	38 24	75 36W	20	17	17		H
SALISBURY FAA AP	8005	01	WICOMICO	38 20	75 31W	48	24	24		H
SAVAGE RIVER DAM	8065	08	GARRETT	39 31	79 8W	1495	08	08	08	CH
SHARPSBURG 5 S	8207	07	WASHINGTON	39 24	77 43W	500	07	07		H
SINES DEEP CREEK	8315	08	GARRETT	39 31	79 25W	2040	07	07		H
SMITHSBURG 2NW	8371	06	WASHINGTON	39 40	77 35W	670	08	08		H
SNOW HILL 4 N	8380	01	WORCESTER	38 14	75 23W	30	17	17		H
SOLOMONS	8405	03	CALVERT	38 19	76 27W	12	08	08		H
STEVENSVILLE 2SW	8557	05	QUEEN ANNE'S	38 58	76 20W	10	07	07		H
SUDLERSVILLE 1S	8657	05	QUEEN ANNE'S	39 10	75 51W	100		20		H
WILLIAMSPORT	9570	07	WASHINGTON	39 37	77 51W	360		06		H
DELAWARE										
DOVER	2730	02	KENT	39 9	75 30W	30	16	16		H
WILMINGTON NEW CASTLE CO AP R	9595	01	NEW CASTLE	39 40	75 36W	79	24	24		HJ
WILMINGTON PORTER RSCH	9605	01	NEW CASTLE	39 46	75 32W	270	24	24		H

REFERENCE NOTES

STATION NAMES: Name of the city, town or locality. Figures and letters following the station names indicate the distance in miles and direction from the post office or town community center.

DIVISIONS: Areas within a state of similar climatological characteristics. Division averages are calculated using data from stations that record temperature and/or precipitation. Station Precipitation totals flagged with an 'F' or 'M' are excluded from the Divisional Average calculations of precipitation. Stations with monthly Temperature averages flagged with an 'F' or 'M' are included in the Divisional Average if there are no more than 9 flagged or missing daily values in the month, else they are excluded from the divisional average for temperature.

NORMALS: The average value of the meteorological element over a time period. Effective 1 January 2012, the averaging period for station departures is 1981 to 2010. The normals for National Weather Service localities have been adjusted so as to be representative for the current observation site.

The January 2011 through December 2015 publications incorrectly state the computation of divisional departures. Climate Division departures have been, and continue to be, computed from 1971-2000 Normals, not 1981-2010 as stated. Station departures are accurately described as departures from 1981-2010.

MONTHLY DEGREE DAY TOTALS: One heating (cooling) degree day is accumulated for each whole degree that the daily mean temperature is below (above) 65 degrees Fahrenheit.

PRECIPITATION: Values shown in hundredths of inches are water equivalent totals, i.e., total of liquid and melted frozen precipitation. In the "Monthly Summarized Data" table the total snow and sleet values shown in tenths of inches are unmelted amounts. The max depth on ground values of snow and sleet shown in whole inches are cumulative unmelted amounts. The number of days with .10, .50, 1.00 or more refers to water equivalents.

PRECIPITATION QUALITY CONTROL: The NCEI quality control process may flag precipitation data that are spatially inconsistent, exceed climatological limits, or are inconsistent with prevailing weather patterns.

TEMPERATURE: Original temperature values are given in the "Daily Temperature" table. Summary temperature information (averages, departures, extremes, monthly degree day totals) is based on the values labeled MAX/MIN.

WIND: (As shown in the "Evaporation and Wind" table) the total wind movement in miles over the evaporation pan as determined by an anemometer recorder located 6-8 inches above the pan.

SYMBOLS AND LETTERS USED IN THE STATION INDEX TABLE

C Station is equipped with recording rain gage (R) but values in this bulletin are from a non-recording rain gage unless indicated by an R.
G Observations appear in the "Soil Temperatures" table.
H Observations appear in the "Snowfall and Snow on the Ground" table.
J Station also published as a Local Climatological Data publication.
VAR Observation time varies.
SR / SS Observation time near sunrise / Observation time near sunset, respectively.

SYMBOLS AND LETTERS USED IN THE DATA TABLES

(DAILY DATA ARE FOR THE 24 HOURS IMMEDIATELY PRECEDING OBSERVATION TIME.)

BLANK Entries in the "Monthly Summarized Data" table indicate no record.

BLANK Entries in the "Daily Precipitation" and "Snowfall and Snow on the Ground" tables indicate zero.

BLANK Entries in the "Daily Temperature" table indicate a missing record

- No record. Data not recorded or not received in time for publication.

+ Precipitation or temperature extremes occurred on one or more previous dates during the month.

* Rain gage not read. Precipitation is included in the amount following the asterisks.

Time distribution may not be known. A * preceding the monthly total indicates precipitation amount is being carried forward to next month's total, and may include amounts from the previous month(s).

a As a subscript, indicates accumulated total.

A Amount of precipitation is the total of observer's entries for the current month. It may include precipitation that occurred during the previous month. Refer to earlier bulletin to determine date of last

reading. (Hawaii stations)

B Divisional Departure from normals are computed using 1971-2000 normals.

E Normalized HDD/CDD Calculation. E is appended to the HDD/CDD Calculation when 1-9 individual daily TMAX and/or TMIN values are missing and a Normalized HDD/CDD Calculation is provided. M appears alone if 10 or more daily values are missing.

F Monthly calculation flagged value. F is appended to average and/or total values computed which exclude one or more daily data values that have been flagged by the GHCN-Daily Dataset

M Insufficient or partial data. M is appended to average and/or total values computed with 1-9 daily values missing. M appears alone if 10 or more daily values are missing, (8 or more for wind and evaporation).

N Indicates snow fall or Snowdepth totals are computed with one or more missing days.

R Amounts from recording rain gage.

T Trace. An amount too small to measure.

SEASONAL TABLES: Monthly and seasonal snowfall and heating degree days for the 12 months ending with the June data are published in the July issue of this bulletin. Cooling degree days for the calendar year are published in the "Climatological Data Annual Summary."

Information concerning the history of changes in locations, exposure, etc. of substations is kept on file at the National Centers for Environmental Information. Historical information of regular National Weather Service Offices may be obtained from the "Local Climatological Data" annual publication. The contents of this publication may be reprinted or otherwise used freely, with proper credit to the National Centers For Environmental Information. The data are also available digitally.

Effective with the January 2011 Data-Month, COOP Observer Names are no longer included in the Monthly and Annual Climatological Data Publications. This information is not published to ensure the privacy of personal information pursuant to Section 208 of the E-Government Act of 2002 (44 USC 3601).

As of the 2011 Data-Year, Station and Climate Division Maps are no longer being included in the CD Publications. NCEI's Products Branch provides updated Station Maps for various data networks via the Historical Observing Metadata Repository: <http://www.ncdc.noaa.gov/homr>.

The GHCN-Daily Quality Control Flags shown below are displayed as superscripts with the data. For more information on Global Historical Climatology Network - Daily and flags, see: <http://www.ncdc.noaa.gov/oa/climate/ghcn-daily/> and Comprehensive Automated Quality Assurance of Daily Surface Observations. Durre, Imke, Matthew J. Menne, Byron E. Gleason, Tamara G. Houston, Russell S. Vose, 2010: J. Appl. Meteor. Climatol., 49, 16151633. doi: 10.1175/2010JAMC2375.1

Blank = Passed All checks	N = failed naught check
D = failed duplicate check	O = failed climatological outlier check
G = failed gap check	R = failed lagged range check
I = failed internal consistency check	S = failed spatial consistency check
K = failed streak/frequent-value check	T = failed temporal consistency check
L = failed check on length of multiday period	W = temperature too warm for snow
M = failed megaconsistency check	X = failed bounds check
	Z = flagged as a result of an official Datzilla investigation

Beginning with the January 2013 CD Publication, monthly mean temperature calculations have changed to the National Data Stewardship Team standard. Monthly maximum and minimum temperatures are not rounded until after the monthly mean temperature is calculated. This is the most accurate outcome, but may be slightly different from the mean derived from rounded monthly maximum and minimum.

The climate division temperature and precipitation values in this publication are based on simple averages from the current set of NWS-Designated Open and Published COOP and First Order Sites within each division. These values differ from those found in NCEI's nClimDiv product. Beginning in February 2014, the nClimDiv product is used by NCEI's Monitoring Branch and in its monthly climate reports. For more details on nClimDiv, please go to <http://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-divisions.php>.

Effective January 2016, Alaska's Climate Divisions are updated to reflect the 13 climate divisional boundaries established by University of Alaska-Fairbanks, NWS, NCEI, Oregon State University, and University of Nebraska-Lincoln. For more details regarding the updated Alaska Climate Divisions, see: <http://journals.ametsoc.org/doi/pdf/10.1175/JAMC-D-11-0168.1> (Bienek et al., 2012).

NOAA National Centers for Environmental Information
Attn: Customer Engagement Branch
151 Patton Avenue
Asheville, NC 28801-5001

Customer Services Number: (828) 271-4800, option 2
TDD : (828) 271-4010
Fax number: (828) 271-4876

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